

setting and baffling boilers coupled with the design of the boilers themselves, is well calculated to intensify combustion and soot difficulties. At the same time the troubles with existing plant

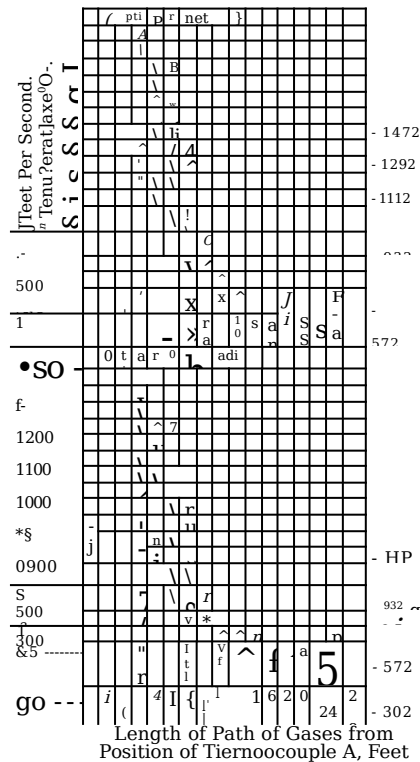


FIG. 171.

Curve showing temperature of the gases flowing through the B. & W. type boiler setting shown in Fig. 170. The letters on the curve refer to pyrometer locations as indicated in Fig. 170. Solid curves show temperatures indicated by pyrometer couples. Dotted curve shows the computed temperatures from experimental data. Dash curve shows computed velocity of gases. This curve is probably based on the assumption that the flowing gases entirely fill the full area of the passage. As the basic assumption does not agree with the action of the gases in this matter, the true velocity curve will be much higher at certain points. Upper and lower diagrams show similar data for two different initial temperatures.

may be considerably reduced by consideration of the laws governing the flow of hot gases.

In April, 1919, the Bureau of Mines issued their Bulletin No. 145 on "Measuring the

Temperature of Gases in Boiler